



SEQ LIST CEN0300 PCT 08.19.03.txt

SEQUENCE LISTING

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Song, Xiao-yu

<120> CNGH0004 POLYPEPTIDES, ANTIBODIES,

<130> CEN0300 PCT

<140> US 60/391,834

<141> 2002-06-27

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<160> 2

<170> PatentIn version 3.1

<210> 1

<211> 11996

<212> DNA

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Gln Gln Met Ser Pro Ser Arg Asn Phe Ser Phe Arg Leu Phe Pro Glu
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Cys Ala Leu Leu Leu Gln Glu Ile Pro Ala Ile Ser Tyr Arg Gly Gly	
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Gly Thr Tyr Lys Pro Glu Gly Ser Pro Gly Gly Ile Ser Ser Cys Ile	
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Cys His Pro Gly Phe Asp Leu Val Gly Ser Ser Ile Ile Leu Cys Leu				
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ccc aat ggt ttg tgg tcc ggt tca gag agc tac tgc aga gta aga aca				2311
Pro Asn Gly Leu Trp Ser Gly Ser Glu Ser Tyr Cys Arg Val Arg Thr				
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Gln Ile Asn Cys Pro Lys Asp Ile Glu Ala Lys Thr Leu Glu Gln Gln				
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Asp Ser Ala Asn Val Thr Trp Gln Ile Pro Thr Ala Lys Asp Asn Ser				
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Tyr Thr Gly	Leu Lys Cys	Glu Thr	Asp Ile Asp	Glu Cys	Ser Pro	
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Glu Asn Ile	Asn Glu Cys	Ser Ser	Ser Pro Cys	Leu Asn	Lys Gly	
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Gly Lys Asn Val Asp Glu Cys Leu Ser Gln Pro Cys Lys Asn Gly			
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Ala Thr Cys Lys Asp Gly Ala Asn Ser Phe Arg Cys Leu Cys Ala			
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Ala Gly Phe Thr Gly Ser His Cys Glu Leu Asn Ile Asn Glu Cys			
1375	1380	1385	
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Gln Ser Asn Pro Cys Arg Asn Gln Ala Thr Cys Val Asp Glu Leu			
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Asn Ser Tyr Ser Cys Lys Cys Gln Pro Gly Phe Ser Gly Lys Arg			
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Cys Glu Thr Glu Gln Ser Thr Gly Phe Asn Leu Asp Phe Glu Val			
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Asp Asn Thr Leu Leu Leu Thr Asp Tyr Asn Gly Trp Val Leu Tyr			
1480	1485	1490	
gtg aat ggc agg gaa aag ata aca aac tgt ccc tcc gtg aat gat			5521
Val Asn Gly Arg Glu Lys Ile Thr Asn Cys Pro Ser Val Asn Asp			
1495	1500	1505	
ggc aga tgg cat cat att gca atc act tgg aca agt gcc aat ggc			5566
Gly Arg Trp His His Ile Ala Ile Thr Trp Thr Ser Ala Asn Gly			
1510	1515	1520	
atc tgg aaa gtc tat atc gat ggg aaa tta tct gac ggt ggt gct			5611
Ile Trp Lys Val Tyr Ile Asp Gly Lys Leu Ser Asp Gly Gly Ala			
1525	1530	1535	
ggc ctc tct gtt ggt ttg ccc ata cct ggt ggt ggt gcg tta gtt			5656
Gly Leu Ser Val Gly Leu Pro Ile Pro Gly Gly Gly Ala Leu Val			
1540	1545	1550	
ctg ggg caa gag caa gac aaa aaa gga gag gga ttc agc cca gct			5701
Leu Gly Gln Glu Gln Asp Lys Lys Gly Glu Gly Phe Ser Pro Ala			
1555	1560	1565	
gag tct ttt gtg ggc tcc ata agc cag ctc aac ctc tgg gac tat			5746
Glu Ser Phe Val Gly Ser Ile Ser Gln Leu Asn Leu Trp Asp Tyr			
1570	1575	1580	
gtc ctg tct cca cag cag gtg aag tca ctg gct acc tcc tgc cca			5791
Val Leu Ser Pro Gln Gln Val Lys Ser Leu Ala Thr Ser Cys Pro			
1585	1590	1595	
gag gaa ctc agt aaa gga aac gtg tta gca tgg cct gat ttc ttg			5836

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Glu	Glu	Leu	Ser	Lys	Gly	Asn	Val	Leu	Ala	Trp	Pro	Asp	Phe	Leu	
		1600					1605					1610			
tca	gga	att	gtg	ggg	aaa	gtg	aag	atc	gat	tct	aag	agc	ata	ttt	5881
Ser	Gly	Ile	Val	Gly	Lys	Val	Lys	Ile	Asp	Ser	Lys	Ser	Ile	Phe	
		1615					1620					1625			
tgt	tct	gat	tgc	cca	cgc	tta	gga	ggg	tca	gtg	cct	cat	ctg	aga	5926
Cys	Ser	Asp	Cys	Pro	Arg	Leu	Gly	Gly	Ser	Val	Pro	His	Leu	Arg	
		1630					1635					1640			
act	gca	tct	gaa	gat	tta	aag	cca	ggg	tcc	aaa	gtc	aat	ctg	ttc	5971
Thr	Ala	Ser	Glu	Asp	Leu	Lys	Pro	Gly	Ser	Lys	Val	Asn	Leu	Phe	
		1645					1650					1655			
tgt	gat	cca	ggc	ttc	cag	ctg	gtc	ggg	aac	cct	gtg	cag	tac	tgt	6016
Cys	Asp	Pro	Gly	Phe	Gln	Leu	Val	Gly	Asn	Pro	Val	Gln	Tyr	Cys	
		1660					1665					1670			
ctg	aat	caa	gga	cag	tgg	aca	caa	cca	ctt	cct	cac	tgt	gaa	cgc	6061
Leu	Asn	Gln	Gly	Gln	Trp	Thr	Gln	Pro	Leu	Pro	His	Cys	Glu	Arg	
		1675					1680					1685			
att	agc	tgt	ggg	gtg	cca	cct	cct	ttg	gag	aat	ggc	ttc	cat	tca	6106
Ile	Ser	Cys	Gly	Val	Pro	Pro	Pro	Leu	Glu	Asn	Gly	Phe	His	Ser	
		1690					1695					1700			
gcc	gat	gac	ttc	tat	gct	ggc	agc	aca	gta	acc	tac	cag	tgc	aac	6151
Ala	Asp	Asp	Phe	Tyr	Ala	Gly	Ser	Thr	Val	Thr	Tyr	Gln	Cys	Asn	
		1705					1710					1715			
aat	ggc	tac	tat	cta	ttg	ggg	gac	tca	agg	atg	ttc	tgt	aca	gat	6196
Asn	Gly	Tyr	Tyr	Leu	Leu	Gly	Asp	Ser	Arg	Met	Phe	Cys	Thr	Asp	
		1720					1725					1730			
aat	ggg	agc	tgg	aac	ggc	gtt	tca	cca	tcc	tgc	ctt	gat	gtc	gat	6241
Asn	Gly	Ser	Trp	Asn	Gly	Val	Ser	Pro	Ser	Cys	Leu	Asp	Val	Asp	
		1735					1740					1745			
gag	tgt	gca	gtt	gga	tca	gat	tgt	agt	gag	cat	gct	tct	tgc	ctg	6286
Glu	Cys	Ala	Val	Gly	Ser	Asp	Cys	Ser	Glu	His	Ala	Ser	Cys	Leu	
		1750					1755					1760			
aac	gta	gat	gga	tcc	tac	ata	tgt	tca	tgt	gtc	cca	ccg	tac	aca	6331
Asn	Val	Asp	Gly	Ser	Tyr	Ile	Cys	Ser	Cys	Val	Pro	Pro	Tyr	Thr	
		1765					1770					1775			
gga	gat	ggg	aaa	aac	tgt	gca	gaa	cct	ata	aaa	tgt	aag	gct	cca	6376
Gly	Asp	Gly	Lys	Asn	Cys	Ala	Glu	Pro	Ile	Lys	Cys	Lys	Ala	Pro	
		1780					1785					1790			
gga	aat	ccg	gaa	aat	ggc	cac	tcc	tca	ggg	gag	att	tat	aca	gta	6421
Gly	Asn	Pro	Glu	Asn	Gly	His	Ser	Ser	Gly	Glu	Ile	Tyr	Thr	Val	
		1795					1800					1805			
ggg	gcc	gca	gtc	aca	ttt	tcg	tgt	cag	gaa	gga	tac	cag	ttg	atg	6466
Gly	Ala	Ala	Val	Thr	Phe	Ser	Cys	Gln	Glu	Gly	Tyr	Gln	Leu	Met	
		1810					1815					1820			
gga	gta	acc	aaa	atc	aca	tgt	ttg	gag	tct	gga	gaa	tgg	aat	cat	6511
Gly	Val	Thr	Lys	Ile	Thr	Cys	Leu	Glu	Ser	Gly	Glu	Trp	Asn	His	
		1825					1830					1835			
cta	ata	cca	tat	tgt	aaa	gct	gtt	tca	tgt	ggg	aaa	ccg	gct	att	6556
Leu	Ile	Pro	Tyr	Cys	Lys	Ala	Val	Ser	Cys	Gly	Lys	Pro	Ala	Ile	
		1840					1845					1850			
cca	gaa	aat	ggg	tgc	att	gag	gag	tta	gca	ttt	act	ttt	ggc	agc	6601
Pro	Glu	Asn	Gly	Cys	Ile	Glu	Glu	Leu	Ala	Phe	Thr	Phe	Gly	Ser	
		1855					1860					1865			
aaa	gtg	aca	tat	agg	tgt	aat	aaa	gga	tat	act	ctg	gcc	ggg	gat	6646
Lys	Val	Thr	Tyr	Arg	Cys	Asn	Lys	Gly	Tyr	Thr	Leu	Ala	Gly	Asp	
		1870					1875					1880			
aaa	gaa	tca	tcc	tgt	ctt	gct	aac	agt	tct	tgg	agt	cat	tcc	cct	6691
Lys	Glu	Ser	Ser	Cys	Leu	Ala	Asn	Ser	Ser	Trp	Ser	His	Ser	Pro	
		1885					1890					1895			

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cct gtg tgt	gaa cca gtg aag tgt	tct agt ccg gaa aat	ata aat	6736
Pro Val Cys	Glu Pro Val Lys Cys	Ser Ser Pro Glu Asn	Ile Asn	
1900	1905	1910		
aat gga aaa	tat att ttg agt ggg	ctt acc tac ctt tct	act gca	6781
Asn Gly Lys	Tyr Ile Leu Ser Gly	Leu Thr Tyr Leu Ser	Thr Ala	
1915	1920	1925		
tca tat tca	tgc gat aca gga tac	agc tta cag ggc cct	tcc att	6826
Ser Tyr Ser	Cys Asp Thr Gly Tyr	Ser Leu Gln Gly Pro	Ser Ile	
1930	1935	1940		
att gaa tgc	acg gct tct ggc atc	tgg gac aga gcg cca	cct gcc	6871
Ile Glu Cys	Thr Ala Ser Gly Ile	Trp Asp Arg Ala Pro	Pro Ala	
1945	1950	1955		
tgt cac ctc	gtc ttc tgt gga gaa	cca cct gcc atc aaa	gat gct	6916
Cys His Leu	Val Phe Cys Gly Glu	Pro Pro Ala Ile Lys	Asp Ala	
1960	1965	1970		
gtc att acg	ggg aat aac ttc act	ttc agg aac acc gtc	act tac	6961
Val Ile Thr	Gly Asn Asn Phe Thr	Phe Arg Asn Thr Val	Thr Tyr	
1975	1980	1985		
act tgc aaa	gaa ggc tat act ctt	gct ggt ctt gac acc	att gaa	7006
Thr Cys Lys	Glu Gly Tyr Thr Leu	Ala Gly Leu Asp Thr	Ile Glu	
1990	1995	2000		
tgc ctg gcc	gac ggc aag tgg agt	aga agt gac cag cag	tgc ctg	7051
Cys Leu Ala	Asp Gly Lys Trp Ser	Arg Ser Asp Gln Gln	Cys Leu	
2005	2010	2015		
gct gtc tcc	tgt gat gag cca ccc	att gtg gac cac gcc	tct cca	7096
Ala Val Ser	Cys Asp Glu Pro Pro	Ile Val Asp His Ala	Ser Pro	
2020	2025	2030		
gag act gcc	cat cgg ctc ttt gga	gac att gca ttc tac	tgc tgc	7141
Glu Thr Ala	His Arg Leu Phe Gly	Asp Ile Ala Phe Tyr	Tyr Cys	
2035	2040	2045		
tct gat ggt	tac agc cta gca gac	aat tcc cag ctt ctc	tgc aat	7186
Ser Asp Gly	Tyr Ser Leu Ala Asp	Asn Ser Gln Leu Leu	Cys Asn	
2050	2055	2060		
gcc cag ggc	aag tgg gta ccc cca	gaa ggt caa gac atg	ccc cgt	7231
Ala Gln Gly	Lys Trp Val Pro Pro	Glu Gly Gln Asp Met	Pro Arg	
2065	2070	2075		
tgt ata gct	cat ttc tgt gaa aaa	cct cca tcg gtt tcc	tat agc	7276
Cys Ile Ala	His Phe Cys Glu Lys	Pro Pro Ser Val Ser	Tyr Ser	
2080	2085	2090		
atc ttg gaa	tct gtg agc aaa gca	aaa ttt gca gct ggc	tca gtt	7321
Ile Leu Glu	Ser Val Ser Lys Ala	Lys Phe Ala Ala Gly	Ser Val	
2095	2100	2105		
gtg agc ttt	aaa tgc atg gaa ggc	ttt gta ctg aac acc	tca gca	7366
Val Ser Phe	Lys Cys Met Glu Gly	Phe Val Leu Asn Thr	Ser Ala	
2110	2115	2120		
aag att gaa	tgt atg aga ggt ggg	cag tgg aac cct tcc	ccc atg	7411
Lys Ile Glu	Cys Met Arg Gly Gly	Gln Trp Asn Pro Ser	Pro Met	
2125	2130	2135		
tcc atc cag	tgc atc cct gtg cgg	tgt gga gag cca cca	agc atc	7456
Ser Ile Gln	Cys Ile Pro Val Arg	Cys Gly Glu Pro Pro	Ser Ile	
2140	2145	2150		
atg aat ggc	tat gca agt gga tca	aac tac agt ttt gga	gcc atg	7501
Met Asn Gly	Tyr Ala Ser Gly Ser	Asn Tyr Ser Phe Gly	Ala Met	
2155	2160	2165		
gtg gct tac	agc tgc aac aag ggg	ttc tac atc aaa ggg	gaa aag	7546
Val Ala Tyr	Ser Cys Asn Lys Gly	Phe Tyr Ile Lys Gly	Glu Lys	
2170	2175	2180		
aag agc acc	tgc gaa gcc aca ggg	cag tgg agt agt cct	ata ccg	7591
Lys Ser Thr	Cys Glu Ala Thr Gly	Gln Trp Ser Ser Pro	Ile Pro	

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2185	2190	2195	
acg tgc cac ccg gta tct tgt ggt gaa cca cct aag gtt gag aat			7636
Thr Cys His Pro Val Ser Cys Gly Glu Pro Pro Lys Val Glu Asn			
2200	2205	2210	
ggc ttt ctg gag cat aca act ggc agg atc ttt gag agt gaa gtg			7681
Gly Phe Leu Glu His Thr Thr Gly Arg Ile Phe Glu Ser Glu Val			
2215	2220	2225	
agg tat cag tgt aac ccg ggc tat aag tca gtc gga agt cct gta			7726
Arg Tyr Gln Cys Asn Pro Gly Tyr Lys Ser Val Gly Ser Pro Val			
2230	2235	2240	
ttt gtc tgc caa gcc aat cgc cac tgg cac agt gaa tcc cct ctg			7771
Phe Val Cys Gln Ala Asn Arg His Trp His Ser Glu Ser Pro Leu			
2245	2250	2255	
atg tgt gtt cct ctc gac tgt gga aaa cct ccc ccg atc cag aat			7816
Met Cys Val Pro Leu Asp Cys Gly Lys Pro Pro Pro Ile Gln Asn			
2260	2265	2270	
ggc ttc atg aaa gga gaa aac ttt gaa gta ggg tcc aag gtt cag			7861
Gly Phe Met Lys Gly Glu Asn Phe Glu Val Gly Ser Lys Val Gln			
2275	2280	2285	
ttt ttc tgt aat gag ggt tat gag ctt gtt ggt gac agt tct tgg			7906
Phe Phe Cys Asn Glu Gly Tyr Glu Leu Val Gly Asp Ser Ser Trp			
2290	2295	2300	
aca tgt cag aaa tct ggc aaa tgg aat aag aag tca aat cca aag			7951
Thr Cys Gln Lys Ser Gly Lys Trp Asn Lys Lys Ser Asn Pro Lys			
2305	2310	2315	
tgc atg cct gcc aag tgc cca gag ccg ccc ctc ttg gaa aac cag			7996
Cys Met Pro Ala Lys Cys Pro Glu Pro Pro Leu Leu Glu Asn Gln			
2320	2325	2330	
cta gta tta aag gag ttg acc acc gag gta gga gtt gtg aca ttt			8041
Leu Val Leu Lys Glu Leu Thr Thr Glu Val Gly Val Val Thr Phe			
2335	2340	2345	
tcc tgt aaa gaa ggg cat gtc ctg caa ggc ccc tct gtc ctg aaa			8086
Ser Cys Lys Glu Gly His Val Leu Gln Gly Pro Ser Val Leu Lys			
2350	2355	2360	
tgc ttg cca tcc cag caa tgg aat gac tct ttc cct gtt tgt aag			8131
Cys Leu Pro Ser Gln Gln Trp Asn Asp Ser Phe Pro Val Cys Lys			
2365	2370	2375	
att gtt ctt tgt acc cca cct ccc cta att tcc ttt ggt gtc ccc			8176
Ile Val Leu Cys Thr Pro Pro Pro Leu Ile Ser Phe Gly Val Pro			
2380	2385	2390	
att cct tct tct gct ctt cat ttt gga agt act gtc aag tat tct			8221
Ile Pro Ser Ser Ala Leu His Phe Gly Ser Thr Val Lys Tyr Ser			
2395	2400	2405	
tgt gta ggt ggg ttt ttc cta aga gga aat tct acc acc ctc tgc			8266
Cys Val Gly Gly Phe Phe Leu Arg Gly Asn Ser Thr Thr Leu Cys			
2410	2415	2420	
caa cct gat ggc acc tgg agc tct cca ctg cca gaa tgt gtt cca			8311
Gln Pro Asp Gly Thr Trp Ser Ser Pro Leu Pro Glu Cys Val Pro			
2425	2430	2435	
gta gaa tgt ccc caa cct gag gaa atc ccc aat gga atc att gat			8356
Val Glu Cys Pro Gln Pro Glu Glu Ile Pro Asn Gly Ile Ile Asp			
2440	2445	2450	
gtg caa ggc ctt gcc tat ctc agc aca gct ctc tat acc tgc aag			8401
Val Gln Gly Leu Ala Tyr Leu Ser Thr Ala Leu Tyr Thr Cys Lys			
2455	2460	2465	
cca ggc ttt gaa ttg gtg gga aat act acc acc ctt tgt gga gaa			8446
Pro Gly Phe Glu Leu Val Gly Asn Thr Thr Thr Leu Cys Gly Glu			
2470	2475	2480	
aat ggt cac tgg ctt gga gga aaa cca aca tgt aaa gcc att gag			8491

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Asn Gly His	Trp Leu Gly Gly Lys	Pro Thr Cys Lys Ala Ile Glu	
2485	2490	2495	
tgc ctg aaa	ccc aag gag att ttg	aat ggc aaa ttc tct tac acg	8536
Cys Leu Lys	Pro Lys Glu Ile Leu	Asn Gly Lys Phe Ser Tyr Thr	
2500	2505	2510	
gac cta cac	tat gga cag acc gtt	acc tac tct tgc aac cga ggc	8581
Asp Leu His	Tyr Gly Gln Thr Val	Thr Tyr Ser Cys Asn Arg Gly	
2515	2520	2525	
ttt cgg ctc	gaa ggt ccc agt gcc	ttg acc tgt tta gag aca ggt	8626
Phe Arg Leu	Glu Gly Pro Ser Ala	Leu Thr Cys Leu Glu Thr Gly	
2530	2535	2540	
gat tgg gat	gta gat gcc cca tct	tgc aat gcc atc cac tgt gat	8671
Asp Trp Asp	Val Asp Ala Pro Ser	Cys Asn Ala Ile His Cys Asp	
2545	2550	2555	
tcc cca caa	ccc att gaa aat ggt	ttt gta gaa ggt gca gat tac	8716
Ser Pro Gln	Pro Ile Glu Asn Gly	Phe Val Glu Gly Ala Asp Tyr	
2560	2565	2570	
agc tat ggt	gcc ata atc atc tac	agt tgc ttc cct ggg ttt cag	8761
Ser Tyr Gly	Ala Ile Ile Ile Tyr	Ser Cys Phe Pro Gly Phe Gln	
2575	2580	2585	
gtg gct ggt	cat gcc atg cag acc	tgt gaa gag tca gga tgg tca	8806
Val Ala Gly	His Ala Met Gln Thr	Cys Glu Glu Ser Gly Trp Ser	
2590	2595	2600	
agt tcc atc	cca aca tgt atg cca	ata gac tgt ggc ctc cct cct	8851
Ser Ser Ile	Pro Thr Cys Met Pro	Ile Asp Cys Gly Leu Pro Pro	
2605	2610	2615	
cat ata gat	ttt gga gac tgt act	aaa ctc aaa gat gac cag gga	8896
His Ile Asp	Phe Gly Asp Cys Thr	Lys Leu Lys Asp Asp Gln Gly	
2620	2625	2630	
tat ttt gag	caa gaa gac gac atg	atg gaa gtt cca tat gtg act	8941
Tyr Phe Glu	Gln Glu Asp Asp Met	Met Glu Val Pro Tyr Val Thr	
2635	2640	2645	
cct cac cct	cct tat cat ttg gga	gca gtg gct aaa acc tgg gaa	8986
Pro His Pro	Pro Tyr His Leu Gly	Ala Val Ala Lys Thr Trp Glu	
2650	2655	2660	
aat aca aag	gag tct cct gct aca	cat tca tca aac ttt ctg tat	9031
Asn Thr Lys	Glu Ser Pro Ala Thr	His Ser Ser Asn Phe Leu Tyr	
2665	2670	2675	
ggg acc atg	gtt tca tac acc tgt	aat cca gga tat gaa ctt ctg	9076
Gly Thr Met	Val Ser Tyr Thr Cys	Asn Pro Gly Tyr Glu Leu Leu	
2680	2685	2690	
ggg aac cct	gtg ctg atc tgc cag	gaa gat gga act tgg aat ggc	9121
Gly Asn Pro	Val Leu Ile Cys Gln	Glu Asp Gly Thr Trp Asn Gly	
2695	2700	2705	
agt gca cca	tcc tgc att tca att	gaa tgt gac ttg cct act gct	9166
Ser Ala Pro	Ser Cys Ile Ser Ile	Glu Cys Asp Leu Pro Thr Ala	
2710	2715	2720	
cct gaa aat	ggc ttt ttg cgt ttt	aca gag act agc atg gga agt	9211
Pro Glu Asn	Gly Phe Leu Arg Phe	Thr Glu Thr Ser Met Gly Ser	
2725	2730	2735	
gct gtg cag	tat agc tgt aaa cct	gga cac att cta gca ggc tct	9256
Ala Val Gln	Tyr Ser Cys Lys Pro	Gly His Ile Leu Ala Gly Ser	
2740	2745	2750	
gac tta agg	ctt tgt cta gag aat	aga aag tgg agt ggt gcc tcc	9301
Asp Leu Arg	Leu Cys Leu Glu Asn	Arg Lys Trp Ser Gly Ala Ser	
2755	2760	2765	
cca cgc tgt	gaa gcc att tca tgc	aaa aag cca aat cca gtc atg	9346
Pro Arg Cys	Glu Ala Ile Ser Cys	Lys Lys Pro Asn Pro Val Met	
2770	2775	2780	

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aat gga tcc atc aaa gga agc aac tac aca tac ctg agc acg ttg	9391
Asn Gly Ser Ile Lys Gly Ser Asn Tyr Thr Tyr Leu Ser Thr Leu	
2785 2790 2795	
tac tat gag tgt gac ccc gga tat gtg ctg aat ggc act gag agg	9436
Tyr Tyr Glu Cys Asp Pro Gly Tyr Val Leu Asn Gly Thr Glu Arg	
2800 2805 2810	
aga aca tgc cag gat gac aaa aac tgg gat gag gat gag ccc att	9481
Arg Thr Cys Gln Asp Asp Lys Asn Trp Asp Glu Asp Glu Pro Ile	
2815 2820 2825	
tgc att cct gtg gac tgc agt tca ccc cca gtc tca gcc aat ggc	9526
Cys Ile Pro Val Asp Cys Ser Ser Pro Pro Val Ser Ala Asn Gly	
2830 2835 2840	
cag gtg aga gga gac gag tac aca ttc caa aaa gag att gaa tac	9571
Gln Val Arg Gly Asp Glu Tyr Thr Phe Gln Lys Glu Ile Glu Tyr	
2845 2850 2855	
act tgc aat gaa ggg ttc ttg ctt gag gga gcc agg agt cgg gtt	9616
Thr Cys Asn Glu Gly Phe Leu Leu Glu Gly Ala Arg Ser Arg Val	
2860 2865 2870	
tgt ctt gcc aat gga agt tgg agt gga gcc act ccc gac tgt gtg	9661
Cys Leu Ala Asn Gly Ser Trp Ser Gly Ala Thr Pro Asp Cys Val	
2875 2880 2885	
cct gtc aga tgt gcc acc ccg cca caa ctg gcc aat ggg gtg acg	9706
Pro Val Arg Cys Ala Thr Pro Pro Gln Leu Ala Asn Gly Val Thr	
2890 2895 2900	
gaa ggc ctg gac tat ggc ttc atg aag gaa gta aca ttc cac tgt	9751
Glu Gly Leu Asp Tyr Gly Phe Met Lys Glu Val Thr Phe His Cys	
2905 2910 2915	
cac gag ggc tac atc ttg cac ggt gct cca aaa ctc acc tgt cag	9796
His Glu Gly Tyr Ile Leu His Gly Ala Pro Lys Leu Thr Cys Gln	
2920 2925 2930	
tca gat ggc aac tgg gat gca gag att cct ctc tgt aaa cca gtc	9841
Ser Asp Gly Asn Trp Asp Ala Glu Ile Pro Leu Cys Lys Pro Val	
2935 2940 2945	
aac tgt gga cct cct gaa gat ctt gcc cat ggt ttc cct aat ggt	9886
Asn Cys Gly Pro Pro Glu Asp Leu Ala His Gly Phe Pro Asn Gly	
2950 2955 2960	
ttt tcc ttt att cat ggg ggc cat ata cag tat cag tgc ttt cct	9931
Phe Ser Phe Ile His Gly Gly His Ile Gln Tyr Gln Cys Phe Pro	
2965 2970 2975	
ggt tat aag ctc cat gga aat tca tca aga agg tgc ctc tcc aat	9976
Gly Tyr Lys Leu His Gly Asn Ser Ser Arg Arg Cys Leu Ser Asn	
2980 2985 2990	
ggc tcc tgg agt ggc agc tca cct tcc tgc ctg cct tgc aga tgt	10021
Gly Ser Trp Ser Gly Ser Ser Pro Ser Cys Leu Pro Cys Arg Cys	
2995 3000 3005	
tcc aca cca gta att gaa tat gga act gtc aat ggg aca gat ttt	10066
Ser Thr Pro Val Ile Glu Tyr Gly Thr Val Asn Gly Thr Asp Phe	
3010 3015 3020	
gac tgt gga aag gca gcc cgg att cag tgc ttc aaa ggc ttc aag	10111
Asp Cys Gly Lys Ala Ala Arg Ile Gln Cys Phe Lys Gly Phe Lys	
3025 3030 3035	
ctc cta gga ctt tct gaa atc acc tgt gaa gcc gat ggc cag tgg	10156
Leu Leu Gly Leu Ser Glu Ile Thr Cys Glu Ala Asp Gly Gln Trp	
3040 3045 3050	
agc tct ggg ttc ccc cac tgt gaa cac act tct tgt ggt tct ctt	10201
Ser Ser Gly Phe Pro His Cys Glu His Thr Ser Cys Gly Ser Leu	
3055 3060 3065	
cca atg ata cca aat gcg ttc atc agt gag acc agc tct tgg aag	10246
Pro Met Ile Pro Asn Ala Phe Ile Ser Glu Thr Ser Ser Trp Lys	

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3070	3075	3080	
gaa aat gtg ata act tac agc tgc agg tct gga tat gtc ata caa			10291
Glu Asn Val Ile Thr Tyr Ser Cys Arg Ser Gly Tyr Val Ile Gln			
3085	3090	3095	
ggc agt tca gat ctg att tgt aca gag aaa ggg gta tgg agc cag			10336
Gly Ser Ser Asp Leu Ile Cys Thr Glu Lys Gly Val Trp Ser Gln			
3100	3105	3110	
cct tat cca gtc tgt gag ccc ttg tcc tgt ggg tcc cca ccg tct			10381
Pro Tyr Pro Val Cys Glu Pro Leu Ser Cys Gly Ser Pro Pro Ser			
3115	3120	3125	
gtc gcc aat gca gtg gca act gga gag gca cac acc tat gaa agt			10426
Val Ala Asn Ala Val Ala Thr Gly Glu Ala His Thr Tyr Glu Ser			
3130	3135	3140	
gaa gtg aaa ctc aga tgt ctg gaa ggt tat acg atg gat aca gat			10471
Glu Val Lys Leu Arg Cys Leu Glu Gly Tyr Thr Met Asp Thr Asp			
3145	3150	3155	
aca gat aca ttc acc tgt cag aaa gat ggt cgc tgg ttc cct gag			10516
Thr Asp Thr Phe Thr Cys Gln Lys Asp Gly Arg Trp Phe Pro Glu			
3160	3165	3170	
aga atc tcc tgc agt cct aaa aaa tgt cct ctc ccg gaa aac ata			10561
Arg Ile Ser Cys Ser Pro Lys Lys Cys Pro Leu Pro Glu Asn Ile			
3175	3180	3185	
aca cat ata ctt gta cat ggg gac gat ttc agt gtg aat agg caa			10606
Thr His Ile Leu Val His Gly Asp Asp Phe Ser Val Asn Arg Gln			
3190	3195	3200	
gtt tct gtg tca tgt gca gaa ggg tat acc ttt gag gga gtt aac			10651
Val Ser Val Ser Cys Ala Glu Gly Tyr Thr Phe Glu Gly Val Asn			
3205	3210	3215	
ata tca gta tgt cag ctt gat gga acc tgg gag cca cca ttc tcc			10696
Ile Ser Val Cys Gln Leu Asp Gly Thr Trp Glu Pro Pro Phe Ser			
3220	3225	3230	
gat gaa tct tgc agt cca gtt tct tgt ggg aaa cct gaa agt cca			10741
Asp Glu Ser Cys Ser Pro Val Ser Cys Gly Lys Pro Glu Ser Pro			
3235	3240	3245	
gaa cat gga ttt gtg gtt ggc agt aaa tac acc ttt gaa agc aca			10786
Glu His Gly Phe Val Val Gly Ser Lys Tyr Thr Phe Glu Ser Thr			
3250	3255	3260	
att att tat cag tgt gag cct ggc tat gaa cta gag ggg aac agg			10831
Ile Ile Tyr Gln Cys Glu Pro Gly Tyr Glu Leu Glu Gly Asn Arg			
3265	3270	3275	
gaa cgt gtc tgc cag gag aac aga cag tgg agt gga ggg gtg gca			10876
Glu Arg Val Cys Gln Glu Asn Arg Gln Trp Ser Gly Gly Val Ala			
3280	3285	3290	
ata tgc aaa gag acc agg tgt gaa act cca ctt gaa ttt ctc aat			10921
Ile Cys Lys Glu Thr Arg Cys Glu Thr Pro Leu Glu Phe Leu Asn			
3295	3300	3305	
ggg aaa gct gac att gaa aac agg acg act gga ccc aac gtg gta			10966
Gly Lys Ala Asp Ile Glu Asn Arg Thr Thr Gly Pro Asn Val Val			
3310	3315	3320	
tat tcc tgc aac aga ggc tac agt ctt gaa ggg cca tct gag gca			11011
Tyr Ser Cys Asn Arg Gly Tyr Ser Leu Glu Gly Pro Ser Glu Ala			
3325	3330	3335	
cac tgc aca gaa aat gga acc tgg agc cac cca gtc cct ctc tgc			11056
His Cys Thr Glu Asn Gly Thr Trp Ser His Pro Val Pro Leu Cys			
3340	3345	3350	
aaa cca aat cca tgc cct gtt cct ttt gtg att ccc gag aat gct			11101
Lys Pro Asn Pro Cys Pro Val Pro Phe Val Ile Pro Glu Asn Ala			
3355	3360	3365	
ctg ctg tct gaa aag gag ttt tat gtt gat cag aat gtg tcc atc			11146

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Leu	Leu	Ser	Glu	Lys	Glu	Phe	Tyr	Val	Asp	Gln	Asn	Val	Ser	Ile	
		3370					3375					3380			
aaa	tgt	agg	gaa	ggg	ttt	ctg	ctg	cag	ggc	cac	ggc	atc	att	acc	11191
Lys	Cys	Arg	Glu	Gly	Phe	Leu	Leu	Gln	Gly	His	Gly	Ile	Ile	Thr	
		3385					3390					3395			
tgc	aac	ccc	gac	gag	acg	tgg	aca	cag	aca	agc	gcc	aaa	tgt	gaa	11236
Cys	Asn	Pro	Asp	Glu	Thr	Trp	Thr	Gln	Thr	Ser	Ala	Lys	Cys	Glu	
		3400					3405					3410			
aaa	atc	tca	tgt	ggg	cca	cca	gct	cac	gta	gaa	aat	gca	att	gct	11281
Lys	Ile	Ser	Cys	Gly	Pro	Pro	Ala	His	Val	Glu	Asn	Ala	Ile	Ala	
		3415					3420					3425			
cga	ggc	gta	cat	tat	caa	tat	gga	gac	atg	atc	acc	tac	tca	tgt	11326
Arg	Gly	Val	His	Tyr	Gln	Tyr	Gly	Asp	Met	Ile	Thr	Tyr	Ser	Cys	
		3430					3435					3440			
tac	agt	gga	tac	atg	ttg	gag	ggg	ttc	ctg	agg	agt	gtt	tgt	tta	11371
Tyr	Ser	Gly	Tyr	Met	Leu	Glu	Gly	Phe	Leu	Arg	Ser	Val	Cys	Leu	
		3445					3450					3455			
gaa	aat	gga	aca	tgg	aca	tca	cct	cct	att	tgc	aga	gct	gtc	tgt	11416
Glu	Asn	Gly	Thr	Trp	Thr	Ser	Pro	Pro	Ile	Cys	Arg	Ala	Val	Cys	
		3460					3465					3470			
cga	ttt	cca	tgt	cag	aat	ggg	ggc	atc	tgc	caa	cgc	cca	aat	gct	11461
Arg	Phe	Pro	Cys	Gln	Asn	Gly	Gly	Ile	Cys	Gln	Arg	Pro	Asn	Ala	
		3475					3480					3485			
tgt	tcc	tgt	cca	gag	ggc	tgg	atg	ggg	cgc	ctc	tgt	gaa	gaa	cca	11506
Cys	Ser	Cys	Pro	Glu	Gly	Trp	Met	Gly	Arg	Leu	Cys	Glu	Glu	Pro	
		3490					3495					3500			
atc	tgc	att	ctt	ccc	tgt	ctg	aac	gga	ggg	cgc	tgt	gtg	gcc	cct	11551
Ile	Cys	Ile	Leu	Pro	Cys	Leu	Asn	Gly	Gly	Arg	Cys	Val	Ala	Pro	
		3505					3510					3515			
tac	cag	tgt	gac	tgc	ccg	cct	ggc	tgg	acg	ggg	tct	cgc	tgt	cat	11596
Tyr	Gln	Cys	Asp	Cys	Pro	Pro	Gly	Trp	Thr	Gly	Ser	Arg	Cys	His	
		3520					3525					3530			
aca	gct	gtt	tgc	cag	tct	ccc	tgc	tta	aat	ggg	gga	aaa	tgt	gta	11641
Thr	Ala	Val	Cys	Gln	Ser	Pro	Cys	Leu	Asn	Gly	Gly	Lys	Cys	Val	
		3535					3540					3545			
aga	cca	aac	cga	tgt	cac	tgt	ctt	tct	tct	tgg	acg	gga	cat	aac	11686
Arg	Pro	Asn	Arg	Cys	His	Cys	Leu	Ser	Ser	Trp	Thr	Gly	His	Asn	
		3550					3555					3560			
tgt	tcc	agg	aaa	agg	agg	act	ggg	ttt	taa	ccactgcacg	accatctggc				11736
Cys	Ser	Arg	Lys	Arg	Arg	Thr	Gly	Phe							
		3565					3570								
tctcccaaaa	gcaggatcat		ctctcctcgg				tagtgccctgg			gcatacctgga		acttatgcaa			11796
ag															

 $\langle 210 \rangle$ 2

<211> 3571

<212> PRT

<213> Homo sapiens

<400> 2

Met Trp Pro Arg Leu Ala Phe Cys Cys Trp Gly Leu Ala Leu Val Ser

1 5 10 15

Gly Trp Ala Thr Phe Gln Gln Met Ser Pro Ser Arg Asn Phe Ser Phe

20 25 30

Arg Leu Phe Pro Glu Thr Ala Pro Gly Ala Pro Gly Ser Ile Pro Ala

35 40 45

Pro Pro Ala Pro Gly Asp Glu Ala Ala Gly Ser Arg Val Glu Arg Leu

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50	55	60													
Gly Gln Ala Phe Arg Arg Arg Val Arg Leu Leu Arg Glu Leu Ser Glu															
65	70	75	80												
Arg Leu Glu Leu Val Phe Leu Val Asp Asp Ser Ser Ser Val Gly Glu															
	85	90	95												
Val Asn Phe Arg Ser Glu Leu Met Phe Val Arg Lys Leu Leu Ser Asp															
	100	105	110												
Phe Pro Val Val Pro Thr Ala Thr Arg Val Ala Ile Val Thr Phe Ser															
	115	120	125												
Ser Lys Asn Tyr Val Val Pro Arg Val Asp Tyr Ile Ser Thr Arg Arg															
	130	135	140												
Ala Arg Gln His Lys Cys Ala Leu Leu Leu Gln Glu Ile Pro Ala Ile															
145	150	155	160												
Ser Tyr Arg Gly Gly Gly Thr Tyr Thr Lys Gly Ala Phe Gln Gln Ala															
	165	170	175												
Ala Gln Ile Leu Leu His Ala Arg Glu Asn Ser Thr Lys Val Val Phe															
	180	185	190												
Leu Ile Thr Asp Gly Tyr Ser Asn Gly Gly Asp Pro Arg Pro Ile Ala															
	195	200	205												
Ala Ser Leu Arg Asp Ser Gly Val Glu Ile Phe Thr Phe Gly Ile Trp															
	210	215	220												
Gln Gly Asn Ile Arg Glu Leu Asn Asp Met Ala Ser Thr Pro Lys Glu															
225	230	235	240												
Glu His Cys Tyr Leu Leu His Ser Phe Glu Glu Phe Glu Ala Leu Ala															
	245	250	255												
Arg Arg Ala Leu His Glu Asp Leu Pro Ser Gly Ser Phe Ile Gln Asp															
	260	265	270												
Asp Met Val His Cys Ser Tyr Leu Cys Asp Glu Gly Lys Asp Cys Cys															
	275	280	285												
Asp Arg Met Gly Ser Cys Lys Cys Gly Thr His Thr Gly His Phe Glu															
	290	295	300												
Cys Ile Cys Glu Lys Gly Tyr Tyr Gly Lys Gly Leu Gln Tyr Glu Cys															
305	310	315	320												
Thr Ala Cys Pro Ser Gly Thr Tyr Lys Pro Glu Gly Ser Pro Gly Gly															
	325	330	335												
Ile Ser Ser Cys Ile Pro Cys Pro Asp Glu Asn His Thr Ser Pro Pro															
	340	345	350												
Gly Ser Thr Ser Pro Glu Asp Cys Val Cys Arg Glu Gly Tyr Arg Ala															
	355	360	365												
Ser Gly Gln Thr Cys Glu Leu Val His Cys Pro Ala Leu Lys Pro Pro															
	370	375	380												
Glu Asn Gly Tyr Phe Ile Gln Asn Thr Cys Asn Asn His Phe Asn Ala															
385	390	395	400												
Ala Cys Gly Val Arg Cys His Pro Gly Phe Asp Leu Val Gly Ser Ser															
	405	410	415												
Ile Ile Leu Cys Leu Pro Asn Gly Leu Trp Ser Gly Ser Glu Ser Tyr															
	420	425	430												
Cys Arg Val Arg Thr Cys Pro His Leu Arg Gln Pro Lys His Gly His															
	435	440	445												
Ile Ser Cys Ser Thr Arg Glu Met Leu Tyr Lys Thr Thr Cys Leu Val															
	450	455	460												
Ala Cys Asp Glu Gly Tyr Arg Leu Glu Gly Ser Asp Lys Leu Thr Cys															
465	470	475	480												
Gln Gly Asn Ser Gln Trp Asp Gly Pro Glu Pro Arg Cys Val Glu Arg															
	485	490	495												
His Cys Ser Thr Phe Gln Met Pro Lys Asp Val Ile Ile Ser Pro His															
	500	505	510												
Asn Cys Gly Lys Gln Pro Ala Lys Phe Gly Thr Ile Cys Tyr Val Ser															
	515	520	525												

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Cys	Arg	Gln	Gly	Phe	Ile	Leu	Ser	Gly	Val	Lys	Glu	Met	Leu	Arg	Cys
530						535					540				
Thr	Thr	Ser	Gly	Lys	Trp	Asn	Val	Gly	Val	Gln	Ala	Ala	Val	Cys	Lys
545					550					555					560
Asp	Val	Glu	Ala	Pro	Gln	Ile	Asn	Cys	Pro	Lys	Asp	Ile	Glu	Ala	Lys
				565					570					575	
Thr	Leu	Glu	Gln	Gln	Asp	Ser	Ala	Asn	Val	Thr	Trp	Gln	Ile	Pro	Thr
				580				585					590		
Ala	Lys	Asp	Asn	Ser	Gly	Glu	Lys	Val	Ser	Val	His	Val	His	Pro	Ala
		595					600					605			
Phe	Thr	Pro	Pro	Tyr	Leu	Phe	Pro	Ile	Gly	Asp	Val	Ala	Ile	Val	Tyr
	610					615					620				
Thr	Ala	Thr	Asp	Leu	Ser	Gly	Asn	Gln	Ala	Ser	Cys	Ile	Phe	His	Ile
625				630						635					640
Lys	Val	Ile	Asp	Ala	Glu	Pro	Pro	Val	Ile	Asp	Trp	Cys	Arg	Ser	Pro
				645					650					655	
Pro	Pro	Val	Gln	Val	Ser	Glu	Lys	Val	His	Ala	Ala	Ser	Trp	Asp	Glu
			660					665					670		
Pro	Gln	Phe	Ser	Asp	Asn	Ser	Gly	Ala	Glu	Leu	Val	Ile	Thr	Arg	Ser
		675					680					685			
His	Thr	Gln	Gly	Asp	Leu	Phe	Pro	Gln	Gly	Glu	Thr	Ile	Val	Gln	Tyr
	690					695					700				
Thr	Ala	Thr	Asp	Pro	Ser	Gly	Asn	Asn	Arg	Thr	Cys	Asp	Ile	His	Ile
705				710						715					720
Val	Ile	Lys	Gly	Ser	Pro	Cys	Glu	Ile	Pro	Phe	Thr	Pro	Val	Asn	Gly
				725					730					735	
Asp	Phe	Ile	Cys	Thr	Pro	Asp	Asn	Thr	Gly	Val	Asn	Cys	Thr	Leu	Thr
			740					745					750		
Cys	Leu	Glu	Gly	Tyr	Asp	Phe	Thr	Glu	Gly	Ser	Thr	Asp	Lys	Tyr	Tyr
	755						760					765			
Cys	Ala	Tyr	Glu	Asp	Gly	Val	Trp	Lys	Pro	Thr	Tyr	Thr	Thr	Glu	Trp
	770					775					780				
Pro	Asp	Cys	Ala	Lys	Lys	Arg	Phe	Ala	Asn	His	Gly	Phe	Lys	Ser	Phe
785					790					795					800
Glu	Met	Phe	Tyr	Lys	Ala	Ala	Arg	Cys	Asp	Thr	Asp	Leu	Met	Lys	
				805					810				815		
Lys	Phe	Ser	Glu	Ala	Phe	Glu	Thr	Thr	Leu	Gly	Lys	Met	Val	Pro	Ser
			820					825					830		
Phe	Cys	Ser	Asp	Ala	Glu	Asp	Ile	Asp	Cys	Arg	Leu	Glu	Glu	Asn	Leu
			835				840					845			
Thr	Lys	Lys	Tyr	Cys	Leu	Glu	Tyr	Asn	Tyr	Asp	Tyr	Glu	Asn	Gly	Phe
	850					855					860				
Ala	Ile	Gly	Pro	Gly	Gly	Trp	Gly	Ala	Ala	Asn	Arg	Leu	Asp	Tyr	Ser
865				870						875					880
Tyr	Asp	Asp	Phe	Leu	Asp	Thr	Val	Gln	Glu	Thr	Ala	Thr	Ser	Ile	Gly
				885					890					895	
Asn	Ala	Lys	Ser	Ser	Arg	Ile	Lys	Arg	Ser	Ala	Pro	Leu	Ser	Asp	Tyr
			900					905					910		
Lys	Ile	Lys	Leu	Ile	Phe	Asn	Ile	Thr	Ala	Ser	Val	Pro	Leu	Pro	Asp
		915					920					925			
Glu	Arg	Asn	Asp	Thr	Leu	Glu	Trp	Glu	Asn	Gln	Gln	Arg	Leu	Leu	Gln
	930					935					940				
Thr	Leu	Glu	Thr	Ile	Thr	Asn	Lys	Leu	Lys	Arg	Thr	Leu	Asn	Lys	Asp
945				950						955					960
Pro	Met	Tyr	Ser	Phe	Gln	Leu	Ala	Ser	Glu	Ile	Leu	Ile	Ala	Asp	Ser
				965					970					975	
Asn	Ser	Leu	Glu	Thr	Lys	Lys	Ala	Ser	Pro	Phe	Cys	Arg	Pro	Gly	Ser
			980					985					990		
Val	Leu	Arg	Gly	Arg	Met	Cys	Val	Asn	Cys	Pro	Leu	Gly	Thr	Tyr	Tyr

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	995	1000	1005
Asn	Leu Glu His Phe Thr Cys	Glu Ser Cys Arg Ile	Gly Ser Tyr
1010		1015	1020
Gln	Asp Glu Glu Gly Gln	Leu Glu Cys Lys Leu	Cys Pro Ser Gly
1025		1030	1035
Met	Tyr Thr Glu Tyr Ile	His Ser Arg Asn Ile	Ser Asp Cys Lys
1040		1045	1050
Ala	Gln Cys Lys Gln Gly	Thr Tyr Ser Tyr Ser	Gly Leu Glu Thr
1055		1060	1065
Cys	Glu Ser Cys Pro Leu	Gly Thr Tyr Gln Pro	Lys Phe Gly Ser
1070		1075	1080
Arg	Ser Cys Leu Ser Cys	Pro Glu Asn Thr Ser	Thr Val Lys Arg
1085		1090	1095
Gly	Ala Val Asn Ile Ser	Ala Cys Gly Val Pro	Cys Pro Glu Gly
1100		1105	1110
Lys	Phe Ser Arg Ser Gly	Leu Met Pro Cys His	Pro Cys Pro Arg
1115		1120	1125
Asp	Tyr Tyr Gln Pro Asn	Ala Gly Lys Ala Phe	Cys Leu Ala Cys
1130		1135	1140
Pro	Phe Tyr Gly Thr Thr	Pro Phe Ala Gly Ser	Arg Ser Ile Thr
1145		1150	1155
Glu	Cys Ser Ser Phe Ser	Ser Thr Phe Ser Ala	Ala Glu Glu Ser
1160		1165	1170
Val	Val Pro Pro Ala Ser	Leu Gly His Ile Lys	Lys Arg His Glu
1175		1180	1185
Ile	Ser Ser Gln Val Phe	His Glu Cys Phe Phe	Asn Pro Cys His
1190		1195	1200
Asn	Ser Gly Thr Cys Gln	Leu Gly Arg Gly	Tyr Val Cys Leu
1205		1210	1215
Cys	Pro Leu Gly Tyr Thr	Gly Leu Lys Cys Glu	Thr Asp Ile Asp
1220		1225	1230
Glu	Cys Ser Pro Leu Pro	Cys Leu Asn Asn Gly	Val Cys Lys Asp
1235		1240	1245
Leu	Val Gly Glu Phe Ile	Cys Glu Cys Pro Ser	Gly Tyr Thr Gly
1250		1255	1260
Gln	Arg Cys Glu Glu Asn	Ile Asn Glu Cys Ser	Ser Ser Pro Cys
1265		1270	1275
Leu	Asn Lys Gly Ile Cys	Val Asp Gly Val Ala	Gly Tyr Arg Cys
1280		1285	1290
Thr	Cys Val Lys Gly Phe	Val Gly Leu His Cys	Glu Thr Glu Val
1295		1300	1305
Asn	Glu Cys Gln Ser Asn	Pro Cys Leu Asn Asn	Ala Val Cys Glu
1310		1315	1320
Asp	Gln Val Gly Gly Phe	Leu Cys Lys Cys Pro	Pro Gly Phe Leu
1325		1330	1335
Gly	Thr Arg Cys Gly Lys	Asn Val Asp Glu Cys	Leu Ser Gln Pro
1340		1345	1350
Cys	Lys Asn Gly Ala Thr	Cys Lys Asp Gly Ala	Asn Ser Phe Arg
1355		1360	1365
Cys	Leu Cys Ala Ala Gly	Phe Thr Gly Ser His	Cys Glu Leu Asn
1370		1375	1380
Ile	Asn Glu Cys Gln Ser	Asn Pro Cys Arg Asn	Gln Ala Thr Cys
1385		1390	1395
Val	Asp Glu Leu Asn Ser	Tyr Ser Cys Lys Cys	Gln Pro Gly Phe
1400		1405	1410
Ser	Gly Lys Arg Cys Glu	Thr Glu Gln Ser Thr	Gly Phe Asn Leu
1415		1420	1425
Asp	Phe Glu Val Ser Gly	Ile Tyr Gly Tyr Val	Met Leu Asp Gly
1430		1435	1440

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Met	Leu	Pro	Ser	Leu	His	Ala	Leu	Thr	Cys	Thr	Phe	Trp	Met	Lys
1445						1450					1455			
Ser	Ser	Asp	Asp	Met	Asn	Tyr	Gly	Thr	Pro	Ile	Ser	Tyr	Ala	Val
1460						1465					1470			
Asp	Asn	Gly	Ser	Asp	Asn	Thr	Leu	Leu	Leu	Thr	Asp	Tyr	Asn	Gly
1475						1480					1485			
Trp	Val	Leu	Tyr	Val	Asn	Gly	Arg	Glu	Lys	Ile	Thr	Asn	Cys	Pro
1490						1495					1500			
Ser	Val	Asn	Asp	Gly	Arg	Trp	His	His	Ile	Ala	Ile	Thr	Trp	Thr
1505						1510					1515			
Ser	Ala	Asn	Gly	Ile	Trp	Lys	Val	Tyr	Ile	Asp	Gly	Lys	Leu	Ser
1520						1525					1530			
Asp	Gly	Gly	Ala	Gly	Leu	Ser	Val	Gly	Leu	Pro	Ile	Pro	Gly	Gly
1535						1540					1545			
Gly	Ala	Leu	Val	Leu	Gly	Gln	Glu	Gln	Asp	Lys	Lys	Gly	Glu	Gly
1550						1555					1560			
Phe	Ser	Pro	Ala	Glu	Ser	Phe	Val	Gly	Ser	Ile	Ser	Gln	Leu	Asn
1565						1570					1575			
Leu	Trp	Asp	Tyr	Val	Leu	Ser	Pro	Gln	Gln	Val	Lys	Ser	Leu	Ala
1580						1585					1590			
Thr	Ser	Cys	Pro	Glu	Glu	Leu	Ser	Lys	Gly	Asn	Val	Leu	Ala	Trp
1595						1600					1605			
Pro	Asp	Phe	Leu	Ser	Gly	Ile	Val	Gly	Lys	Val	Lys	Ile	Asp	Ser
1610						1615					1620			
Lys	Ser	Ile	Phe	Cys	Ser	Asp	Cys	Pro	Arg	Leu	Gly	Gly	Ser	Val
1625						1630					1635			
Pro	His	Leu	Arg	Thr	Ala	Ser	Glu	Asp	Leu	Lys	Pro	Gly	Ser	Lys
1640						1645					1650			
Val	Asn	Leu	Phe	Cys	Asp	Pro	Gly	Phe	Gln	Leu	Val	Gly	Asn	Pro
1655						1660					1665			
Val	Gln	Tyr	Cys	Leu	Asn	Gln	Gly	Gln	Trp	Thr	Gln	Pro	Leu	Pro
1670						1675					1680			
His	Cys	Glu	Arg	Ile	Ser	Cys	Gly	Val	Pro	Pro	Pro	Leu	Glu	Asn
1685						1690					1695			
Gly	Phe	His	Ser	Ala	Asp	Asp	Phe	Tyr	Ala	Gly	Ser	Thr	Val	Thr
1700						1705					1710			
Tyr	Gln	Cys	Asn	Asn	Gly	Tyr	Tyr	Leu	Leu	Gly	Asp	Ser	Arg	Met
1715						1720					1725			
Phe	Cys	Thr	Asp	Asn	Gly	Ser	Trp	Asn	Gly	Val	Ser	Pro	Ser	Cys
1730						1735					1740			
Leu	Asp	Val	Asp	Glu	Cys	Ala	Val	Gly	Ser	Asp	Cys	Ser	Glu	His
1745						1750					1755			
Ala	Ser	Cys	Leu	Asn	Val	Asp	Gly	Ser	Tyr	Ile	Cys	Ser	Cys	Val
1760						1765					1770			
Pro	Pro	Tyr	Thr	Gly	Asp	Gly	Lys	Asn	Cys	Ala	Glu	Pro	Ile	Lys
1775						1780					1785			
Cys	Lys	Ala	Pro	Gly	Asn	Pro	Glu	Asn	Gly	His	Ser	Ser	Gly	Glu
1790						1795					1800			
Ile	Tyr	Thr	Val	Gly	Ala	Ala	Val	Thr	Phe	Ser	Cys	Gln	Glu	Gly
1805						1810					1815			
Tyr	Gln	Leu	Met	Gly	Val	Thr	Lys	Ile	Thr	Cys	Leu	Glu	Ser	Gly
1820						1825					1830			
Glu	Trp	Asn	His	Leu	Ile	Pro	Tyr	Cys	Lys	Ala	Val	Ser	Cys	Gly
1835						1840					1845			
Lys	Pro	Ala	Ile	Pro	Glu	Asn	Gly	Cys	Ile	Glu	Glu	Leu	Ala	Phe
1850						1855					1860			
Thr	Phe	Gly	Ser	Lys	Val	Thr	Tyr	Arg	Cys	Asn	Lys	Gly	Tyr	Thr
1865						1870					1875			
Leu	Ala	Gly	Asp	Lys	Glu	Ser	Ser	Cys	Leu	Ala	Asn	Ser	Ser	Trp

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1880	1885	1890
Ser His Ser Pro Pro Val	Cys Glu Pro Val Lys	Cys Ser Ser Pro
1895	1900	1905
Glu Asn Ile Asn Asn Gly	Lys Tyr Ile Leu Ser	Gly Leu Thr Tyr
1910	1915	1920
Leu Ser Thr Ala Ser Tyr	Ser Cys Asp Thr Gly	Tyr Ser Leu Gln
1925	1930	1935
Gly Pro Ser Ile Ile Glu	Cys Thr Ala Ser Gly	Ile Trp Asp Arg
1940	1945	1950
Ala Pro Pro Ala Cys His	Leu Val Phe Cys Gly	Glu Pro Pro Ala
1955	1960	1965
Ile Lys Asp Ala Val Ile	Thr Gly Asn Asn Phe	Thr Phe Arg Asn
1970	1975	1980
Thr Val Thr Tyr Thr Cys	Lys Glu Gly Tyr Thr	Leu Ala Gly Leu
1985	1990	1995
Asp Thr Ile Glu Cys Leu	Ala Asp Gly Lys Trp	Ser Arg Ser Asp
2000	2005	2010
Gln Gln Cys Leu Ala Val	Ser Cys Asp Glu Pro	Pro Ile Val Asp
2015	2020	2025
His Ala Ser Pro Glu Thr	Ala His Arg Leu Phe	Gly Asp Ile Ala
2030	2035	2040
Phe Tyr Tyr Cys Ser Asp	Gly Tyr Ser Leu Ala	Asp Asn Ser Gln
2045	2050	2055
Leu Leu Cys Asn Ala Gln	Gly Lys Trp Val Pro	Pro Glu Gly Gln
2060	2065	2070
Asp Met Pro Arg Cys Ile	Ala His Phe Cys Glu	Lys Pro Pro Ser
2075	2080	2085
Val Ser Tyr Ser Ile Leu	Glu Ser Val Ser Lys	Ala Lys Phe Ala
2090	2095	2100
Ala Gly Ser Val Val Ser	Phe Lys Cys Met Glu	Gly Phe Val Leu
2105	2110	2115
Asn Thr Ser Ala Lys Ile	Glu Cys Met Arg Gly	Gly Gln Trp Asn
2120	2125	2130
Pro Ser Pro Met Ser Ile	Gln Cys Ile Pro Val	Arg Cys Gly Glu
2135	2140	2145
Pro Pro Ser Ile Met Asn	Gly Tyr Ala Ser Gly	Ser Asn Tyr Ser
2150	2155	2160
Phe Gly Ala Met Val Ala	Tyr Ser Cys Asn Lys	Gly Phe Tyr Ile
2165	2170	2175
Lys Gly Glu Lys Lys Ser	Thr Cys Glu Ala Thr	Gly Gln Trp Ser
2180	2185	2190
Ser Pro Ile Pro Thr Cys	His Pro Val Ser Cys	Gly Glu Pro Pro
2195	2200	2205
Lys Val Glu Asn Gly Phe	Leu Glu His Thr Thr	Gly Arg Ile Phe
2210	2215	2220
Glu Ser Glu Val Arg Tyr	Gln Cys Asn Pro Gly	Tyr Lys Ser Val
2225	2230	2235
Gly Ser Pro Val Phe Val	Cys Gln Ala Asn Arg	His Trp His Ser
2240	2245	2250
Glu Ser Pro Leu Met Cys	Val Pro Leu Asp Cys	Gly Lys Pro Pro
2255	2260	2265
Pro Ile Gln Asn Gly Phe	Met Lys Gly Glu Asn	Phe Glu Val Gly
2270	2275	2280
Ser Lys Val Gln Phe Phe	Cys Asn Glu Gly Tyr	Glu Leu Val Gly
2285	2290	2295
Asp Ser Ser Trp Thr Cys	Gln Lys Ser Gly Lys	Trp Asn Lys Lys
2300	2305	2310
Ser Asn Pro Lys Cys Met	Pro Ala Lys Cys Pro	Glu Pro Pro Leu
2315	2320	2325

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Leu	Glu	Asn	Gln	Leu	Val	Leu	Lys	Glu	Leu	Thr	Thr	Glu	Val	Gly
2330						2335						2340		
Val	Val	Thr	Phe	Ser	Cys	Lys	Glu	Gly	His	Val	Leu	Gln	Gly	Pro
2345						2350						2355		
Ser	Val	Leu	Lys	Cys	Leu	Pro	Ser	Gln	Gln	Trp	Asn	Asp	Ser	Phe
2360						2365						2370		
Pro	Val	Cys	Lys	Ile	Val	Leu	Cys	Thr	Pro	Pro	Pro	Leu	Ile	Ser
2375						2380						2385		
Phe	Gly	Val	Pro	Ile	Pro	Ser	Ser	Ala	Leu	His	Phe	Gly	Ser	Thr
2390						2395						2400		
Val	Lys	Tyr	Ser	Cys	Val	Gly	Gly	Phe	Phe	Leu	Arg	Gly	Asn	Ser
2405						2410						2415		
Thr	Thr	Leu	Cys	Gln	Pro	Asp	Gly	Thr	Trp	Ser	Ser	Pro	Leu	Pro
2420						2425						2430		
Glu	Cys	Val	Pro	Val	Glu	Cys	Pro	Gln	Pro	Glu	Glu	Ile	Pro	Asn
2435						2440						2445		
Gly	Ile	Ile	Asp	Val	Gln	Gly	Leu	Ala	Tyr	Leu	Ser	Thr	Ala	Leu
2450						2455						2460		
Tyr	Thr	Cys	Lys	Pro	Gly	Phe	Glu	Leu	Val	Gly	Asn	Thr	Thr	Thr
2465						2470						2475		
Leu	Cys	Gly	Glu	Asn	Gly	His	Trp	Leu	Gly	Gly	Lys	Pro	Thr	Cys
2480						2485						2490		
Lys	Ala	Ile	Glu	Cys	Leu	Lys	Pro	Lys	Glu	Ile	Leu	Asn	Gly	Lys
2495						2500						2505		
Phe	Ser	Tyr	Thr	Asp	Leu	His	Tyr	Gly	Gln	Thr	Val	Thr	Tyr	Ser
2510						2515						2520		
Cys	Asn	Arg	Gly	Phe	Arg	Leu	Glu	Gly	Pro	Ser	Ala	Leu	Thr	Cys
2525						2530						2535		
Leu	Glu	Thr	Gly	Asp	Trp	Asp	Val	Asp	Ala	Pro	Ser	Cys	Asn	Ala
2540						2545						2550		
Ile	His	Cys	Asp	Ser	Pro	Gln	Pro	Ile	Glu	Asn	Gly	Phe	Val	Glu
2555						2560						2565		
Gly	Ala	Asp	Tyr	Ser	Tyr	Gly	Ala	Ile	Ile	Ile	Tyr	Ser	Cys	Phe
2570						2575						2580		
Pro	Gly	Phe	Gln	Val	Ala	Gly	His	Ala	Met	Gln	Thr	Cys	Glu	Glu
2585						2590						2595		
Ser	Gly	Trp	Ser	Ser	Ser	Ile	Pro	Thr	Cys	Met	Pro	Ile	Asp	Cys
2600						2605						2610		
Gly	Leu	Pro	Pro	His	Ile	Asp	Phe	Gly	Asp	Cys	Thr	Lys	Leu	Lys
2615						2620						2625		
Asp	Asp	Gln	Gly	Tyr	Phe	Glu	Gln	Glu	Asp	Asp	Met	Met	Glu	Val
2630						2635						2640		
Pro	Tyr	Val	Thr	Pro	His	Pro	Pro	Tyr	His	Leu	Gly	Ala	Val	Ala
2645						2650						2655		
Lys	Thr	Trp	Glu	Asn	Thr	Lys	Glu	Ser	Pro	Ala	Thr	His	Ser	Ser
2660						2665						2670		
Asn	Phe	Leu	Tyr	Gly	Thr	Met	Val	Ser	Tyr	Thr	Cys	Asn	Pro	Gly
2675						2680						2685		
Tyr	Glu	Leu	Leu	Gly	Asn	Pro	Val	Leu	Ile	Cys	Gln	Glu	Asp	Gly
2690						2695						2700		
Thr	Trp	Asn	Gly	Ser	Ala	Pro	Ser	Cys	Ile	Ser	Ile	Glu	Cys	Asp
2705						2710						2715		
Leu	Pro	Thr	Ala	Pro	Glu	Asn	Gly	Phe	Leu	Arg	Phe	Thr	Glu	Thr
2720						2725						2730		
Ser	Met	Gly	Ser	Ala	Val	Gln	Tyr	Ser	Cys	Lys	Pro	Gly	His	Ile
2735						2740						2745		
Leu	Ala	Gly	Ser	Asp	Leu	Arg	Leu	Cys	Leu	Glu	Asn	Arg	Lys	Trp
2750						2755						2760		
Ser	Gly	Ala	Ser	Pro	Arg	Cys	Glu	Ala	Ile	Ser	Cys	Lys	Lys	Pro

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2765	Asn Pro Val Met Asn Gly	2770	Ser Ile Lys Gly Ser	2775	Asn Tyr Thr Tyr
2780	Leu Ser Thr Leu Tyr Tyr	2785	Glu Cys Asp Pro Gly	2790	Tyr Val Leu Asn
2795	Gly Thr Glu Arg Arg Thr	2800	Cys Gln Asp Asp Lys	2805	Asn Trp Asp Glu
2810	Asp Glu Pro Ile Cys Ile	2815	Pro Val Asp Cys Ser	2820	Ser Pro Pro Val
2825	Ser Ala Asn Gly Gln Val	2830	Arg Gly Asp Glu Tyr	2835	Thr Phe Gln Lys
2840	Glu Ile Glu Tyr Thr Cys	2845	Asn Glu Gly Phe Leu	2850	Leu Glu Gly Ala
2855	Arg Ser Arg Val Cys Leu	2860	Ala Asn Gly Ser Trp	2865	Ser Gly Ala Thr
2870	Pro Asp Cys Val Pro Val	2875	Arg Cys Ala Thr Pro	2880	Pro Gln Leu Ala
2885	Asn Gly Val Thr Glu Gly	2890	Leu Asp Tyr Gly Phe	2895	Met Lys Glu Val
2900	Thr Phe His Cys His Glu	2905	Gly Tyr Ile Leu His	2910	Gly Ala Pro Lys
2915	Leu Thr Cys Gln Ser Asp	2920	Gly Asn Trp Asp Ala	2925	Glu Ile Pro Leu
2930	Cys Lys Pro Val Asn Cys	2935	Gly Pro Pro Glu Asp	2940	Leu Ala His Gly
2945	Phe Pro Asn Gly Phe Ser	2950	Phe Ile His Gly Gly	2955	His Ile Gln Tyr
2960	Gln Cys Phe Pro Gly Tyr	2965	Lys Leu His Gly Asn	2970	Ser Ser Arg Arg
2975	Cys Leu Ser Asn Gly Ser	2980	Trp Ser Gly Ser Ser	2985	Pro Ser Cys Leu
2990	Pro Cys Arg Cys Ser Thr	2995	Pro Val Ile Glu Tyr	3000	Gly Thr Val Asn
3005	Gly Thr Asp Phe Asp Cys	3010	Gly Lys Ala Ala Arg	3015	Ile Gln Cys Phe
3020	Lys Gly Phe Lys Leu Leu	3025	Gly Leu Ser Glu Ile	3030	Thr Cys Glu Ala
3035	Asp Gly Gln Trp Ser Ser	3040	Gly Phe Pro His Cys	3045	Glu His Thr Ser
3050	Cys Gly Ser Leu Pro Met	3055	Ile Pro Asn Ala Phe	3060	Ile Ser Glu Thr
3065	Ser Ser Trp Lys Glu Asn	3070	Val Ile Thr Tyr Ser	3075	Cys Arg Ser Gly
3080	Tyr Val Ile Gln Gly Ser	3085	Ser Asp Leu Ile Cys	3090	Thr Glu Lys Gly
3095	Val Trp Ser Gln Pro Tyr	3100	Pro Val Cys Glu Pro	3105	Leu Ser Cys Gly
3110	Ser Pro Pro Ser Val Ala	3115	Asn Ala Val Ala Thr	3120	Gly Glu Ala His
3125	Thr Tyr Glu Ser Glu Val	3130	Lys Leu Arg Cys Leu	3135	Glu Gly Tyr Thr
3140	Met Asp Thr Asp Thr Asp	3145	Thr Phe Thr Cys Gln	3150	Lys Asp Gly Arg
3155	Trp Phe Pro Glu Arg Ile	3160	Ser Cys Ser Pro Lys	3165	Lys Cys Pro Leu
3170	Pro Glu Asn Ile Thr His	3175	Ile Leu Val His Gly	3180	Asp Asp Phe Ser
3185	Val Asn Arg Gln Val Ser	3190	Val Ser Cys Ala Glu	3195	Gly Tyr Thr Phe
3200		3205		3210	

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Glu Gly Val Asn Ile Ser	Val Cys Gln Leu Asp Gly Thr Trp Glu
3215	3220 3225
Pro Pro Phe Ser Asp Glu	Ser Cys Ser Pro Val Ser Cys Gly Lys
3230	3235 3240
Pro Glu Ser Pro Glu His	Gly Phe Val Val Gly Ser Lys Tyr Thr
3245	3250 3255
Phe Glu Ser Thr Ile Ile	Tyr Gln Cys Glu Pro Gly Tyr Glu Leu
3260	3265 3270
Glu Gly Asn Arg Glu Arg	Val Cys Gln Glu Asn Arg Gln Trp Ser
3275	3280 3285
Gly Gly Val Ala Ile Cys	Lys Glu Thr Arg Cys Glu Thr Pro Leu
3290	3295 3300
Glu Phe Leu Asn Gly Lys	Ala Asp Ile Glu Asn Arg Thr Thr Gly
3305	3310 3315
Pro Asn Val Val Tyr Ser	Cys Asn Arg Gly Tyr Ser Leu Glu Gly
3320	3325 3330
Pro Ser Glu Ala His Cys	Thr Glu Asn Gly Thr Trp Ser His Pro
3335	3340 3345
Val Pro Leu Cys Lys Pro	Asn Pro Cys Pro Val Pro Phe Val Ile
3350	3355 3360
Pro Glu Asn Ala Leu Leu	Ser Glu Lys Glu Phe Tyr Val Asp Gln
3365	3370 3375
Asn Val Ser Ile Lys Cys	Arg Glu Gly Phe Leu Leu Gln Gly His
3380	3385 3390
Gly Ile Ile Thr Cys Asn	Pro Asp Glu Thr Trp Thr Gln Thr Ser
3395	3400 3405
Ala Lys Cys Glu Lys Ile	Ser Cys Gly Pro Pro Ala His Val Glu
3410	3415 3420
Asn Ala Ile Ala Arg Gly	Val His Tyr Gln Tyr Gly Asp Met Ile
3425	3430 3435
Thr Tyr Ser Cys Tyr Ser	Gly Tyr Met Leu Glu Gly Phe Leu Arg
3440	3445 3450
Ser Val Cys Leu Glu Asn	Gly Thr Trp Thr Ser Pro Pro Ile Cys
3455	3460 3465
Arg Ala Val Cys Arg Phe	Pro Cys Gln Asn Gly Gly Ile Cys Gln
3470	3475 3480
Arg Pro Asn Ala Cys Ser	Cys Pro Glu Gly Trp Met Gly Arg Leu
3485	3490 3495
Cys Glu Glu Pro Ile Cys	Ile Leu Pro Cys Leu Asn Gly Gly Arg
3500	3505 3510
Cys Val Ala Pro Tyr Gln	Cys Asp Cys Pro Pro Gly Trp Thr Gly
3515	3520 3525
Ser Arg Cys His Thr Ala	Val Cys Gln Ser Pro Cys Leu Asn Gly
3530	3535 3540
Gly Lys Cys Val Arg Pro	Asn Arg Cys His Cys Leu Ser Ser Trp
3545	3550 3555
Thr Gly His Asn Cys Ser	Arg Lys Arg Arg Thr Gly Phe
3560	3565 3570